



Case # BZA-03-24-00764

Charleston County BZA Meeting of May 6, 2024

Applicant/Property Owner: James Ellis

Property Location: 224 Riverland Drive – James Island

TMS#: 343-06-00-127

Zoning District: Low Density Residential (R-4) Zoning District

Request: Variance request for construction within a restricted area three times the DBH (Critical Root Zone) of a 25.5" DBH Grand Laurel Oak Tree for an accessory building.

Requirement:

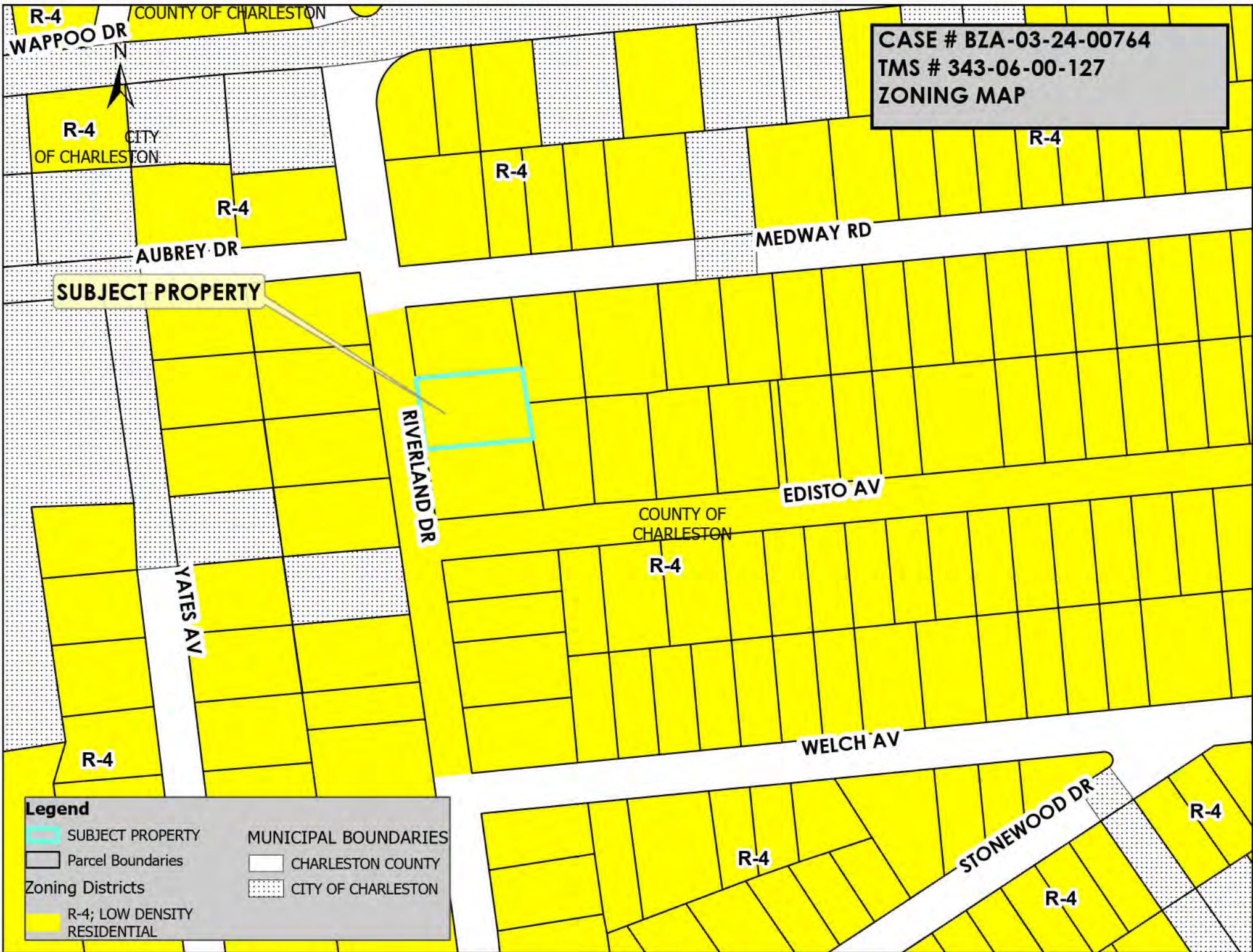
*The Charleston County Zoning and Land Development Regulations Ordinance (ZLDR), Chapter 9 Development Standards, Article 9.2 Tree Protection and Preservation, Sec. 9.2.4.C. Required Tree Protection states, "In no case shall any paving, filling, grading, Building, or construction footing occur or be placed within three times the DBH in inches from the trunk of the Tree, unless otherwise approved by the Board of Zoning Appeals."*

## Sec. 9.2.4 Required Tree Protection

### A. General.

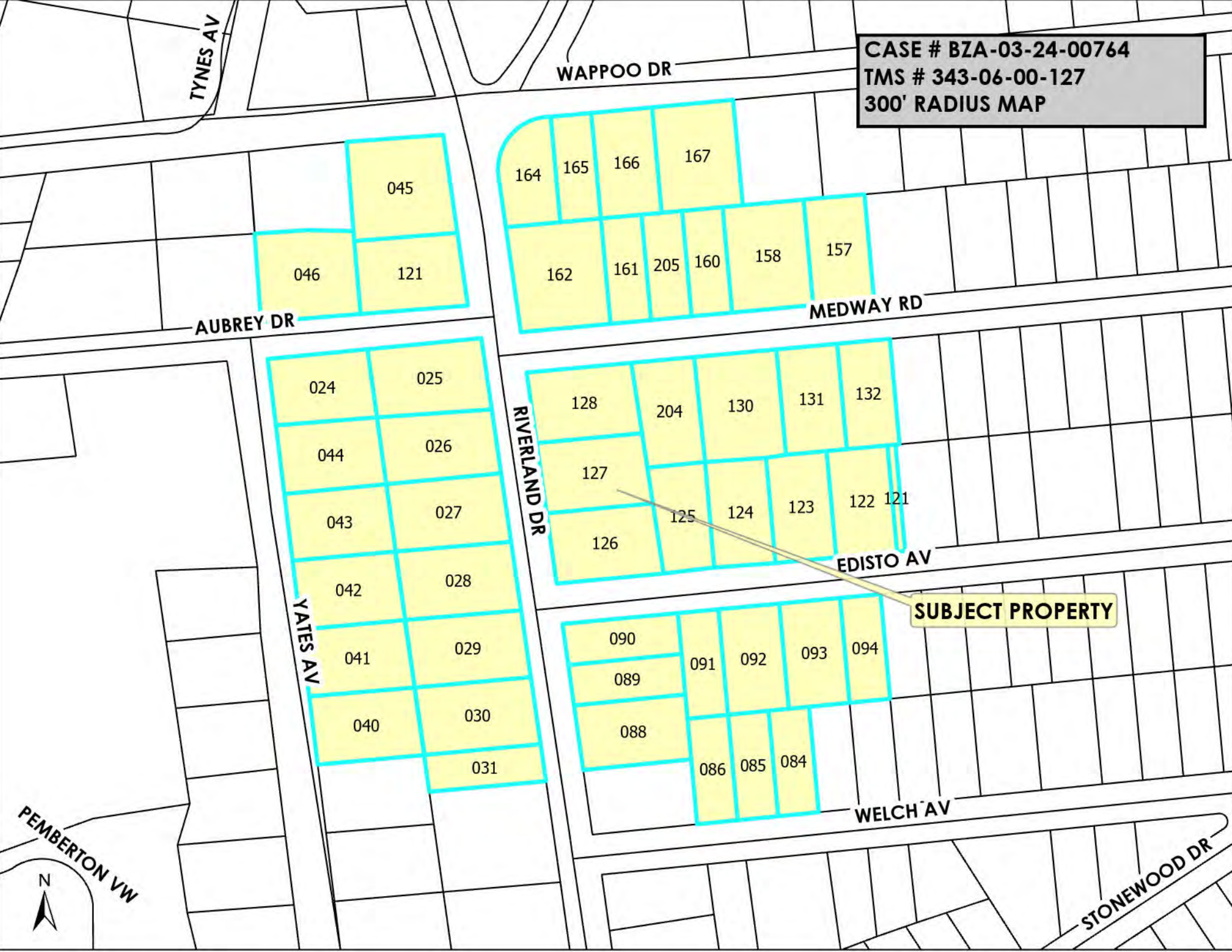
1. All Grand Trees and any other Trees required to remain on a site must be protected during construction and Development of a Parcel. Tree protection must be shown on all Development plans prior to site plan approval. A site inspection of the Tree barricades must be scheduled by the Applicant with the Zoning and Planning Department for approval prior to the issuance of permits or the start of Development activities.
  2. Prior to issuance of a Zoning Permit, a pre-construction planning conference is required for on-site Tree preservation with the Zoning and Planning Director or staff representative, the Applicant(s), and any appropriate parties for determining if there is need for additional Tree protection techniques and for designating placement of Tree barricades, construction employee parking, temporary construction office, and dumpsters.
- B. Prior to the start of Land Development activities, protective Tree barricades shall be placed around all Required Trees in or near Development areas. The barricades shall be constructed of wood, metal, or plastic fencing or other materials approved by the Zoning and Planning Director; and include a top rail. Tree barricades shall be placed beneath the canopy Drip Line or one foot times the DBH of the Tree as a radius from the trunk, whichever is greater. Other protective devices or construction techniques may be used as approved by the Zoning and Planning Director. Three inches of mulch shall be installed and maintained within all Tree barricade areas. The mulch shall remain in place throughout Development activities. The area within the Tree barricade shall remain free of all Building materials, dirt, fill, and other construction debris, vehicles, and Development activities. All Required Trees are also subject to the requirements of Sec. 9.4.6, *Landscape Materials Standards*, and Article 11.3, *Enforcement Responsibility and Complaints*.
- C. In no case shall any paving, filling, grading, Building, or construction footing occur or be placed within three times the DBH in inches from the trunk of the Tree, unless otherwise approved by the Board of Zoning Appeals.
- D. Limited Clearing and Grubbing may be authorized by the Zoning and Planning Director prior to the installation of Tree barricades on sites that exhibit unusually heavy undergrowth and where access to the interior of the site and its Protected Trees is impractical. Limited Clearing shall be for the express purpose of accessing the property and Protected Trees to erect the Required Tree barricades and silt fencing. Such limited Clearing shall be done with hand tools, push or walk -behind equipment, or lightweight bush-hog type equipment designed for brush and undergrowth Clearing and which is not capable of removing vegetation greater than three inches in diameter. Under no circumstances may metal-tracked bulldozers, loaders, or similar rider/operator equipment be allowed on site until the Tree barricades are erected and a Zoning Permit is issued.
- E. Limited encroachments into the area located within Tree barricades may be allowed by the Zoning and Planning Director provided that encroachments do not constitute more than 25 percent of the protected area beneath a Tree and do not occur in the area located within three times the DBH in inches from the trunk of the Tree unless otherwise approved by the BZA. Any paving, Grading, trenching, or filling of the protected area must be pre-approved by the Zoning and Planning Director or the Board of Zoning Appeals, as required by this Ordinance, and may require specific construction techniques to preserve the health of the Tree. When grading and construction within the protected area of a Tree has been approved, all damaged roots shall be severed clean.
- F. Prior to issuance of a Zoning Permit for uses other than Single-Family Detached Residential, the following numbers of Trees with a DBH of eight inches or greater shall be preserved and protected pursuant to the requirements of this Ordinance. Preservation and protection of native Trees is to be prioritized. Properties within the Industrial (IN) District may elect to mitigate the removal of these Protected Trees, as described in Sec. 9.2.6.D, with the exception that all Grand trees and any required Buffer tree measuring eight inches (8") or greater shall be preserved. On properties in the IN District that elect to mitigate the removal of these Protected Trees and where the planting of canopy trees is required within Buffers and other landscaping, screening, and buffer areas, canopy trees shall be a minimum of four inch (4") caliper:
1. 20 Trees per acre; or
  2. Any number of Trees with a combined DBH of at least 160 inches per acre.
- G. When Lots lack a sufficient number of Trees to meet the requirement for DBH/number of Trees per acre, this requirement shall be fulfilled by existing Trees and must equal 40 inches per acre combined DBH. On Lots with less than 40 inches per acre combined DBH, additional Trees shall be planted on the Lot equaling or exceeding 40 inches per acre combined DBH. Planting schedules shall be approved by the Zoning and Planning Director. Properties within the Industrial (IN) District may elect to mitigate the removal of Protected Trees, as described in Sec. 9.2.6.D, with the exception that all Grand Trees and any required Buffer tree measuring eight inches (8") or greater shall be preserved. On properties in the IN District that elect to mitigate the removal of Protected Trees and where the planting of canopy trees is required within Buffers and other landscaping, screening and buffer areas, canopy trees shall be a minimum of four inch (4") caliper:







CASE # BZA-03-24-00764  
TMS # 343-06-00-127  
300' RADIUS MAP



**SUBJECT PROPERTY**





CASE # BZA-03-24-00764  
TMS # 343-06-00-127  
AERIAL VIEW

MEDWAY RD

SUBJECT PROPERTY

RIVERLAND DR



EDISTO AV



WAPPOO DR

CASE # BZA-03-24-00764  
TMS # 343-06-00-127  
AERIAL VIEW

SUBJECT PROPERTY

AUBREY DR

MEDWAY RD

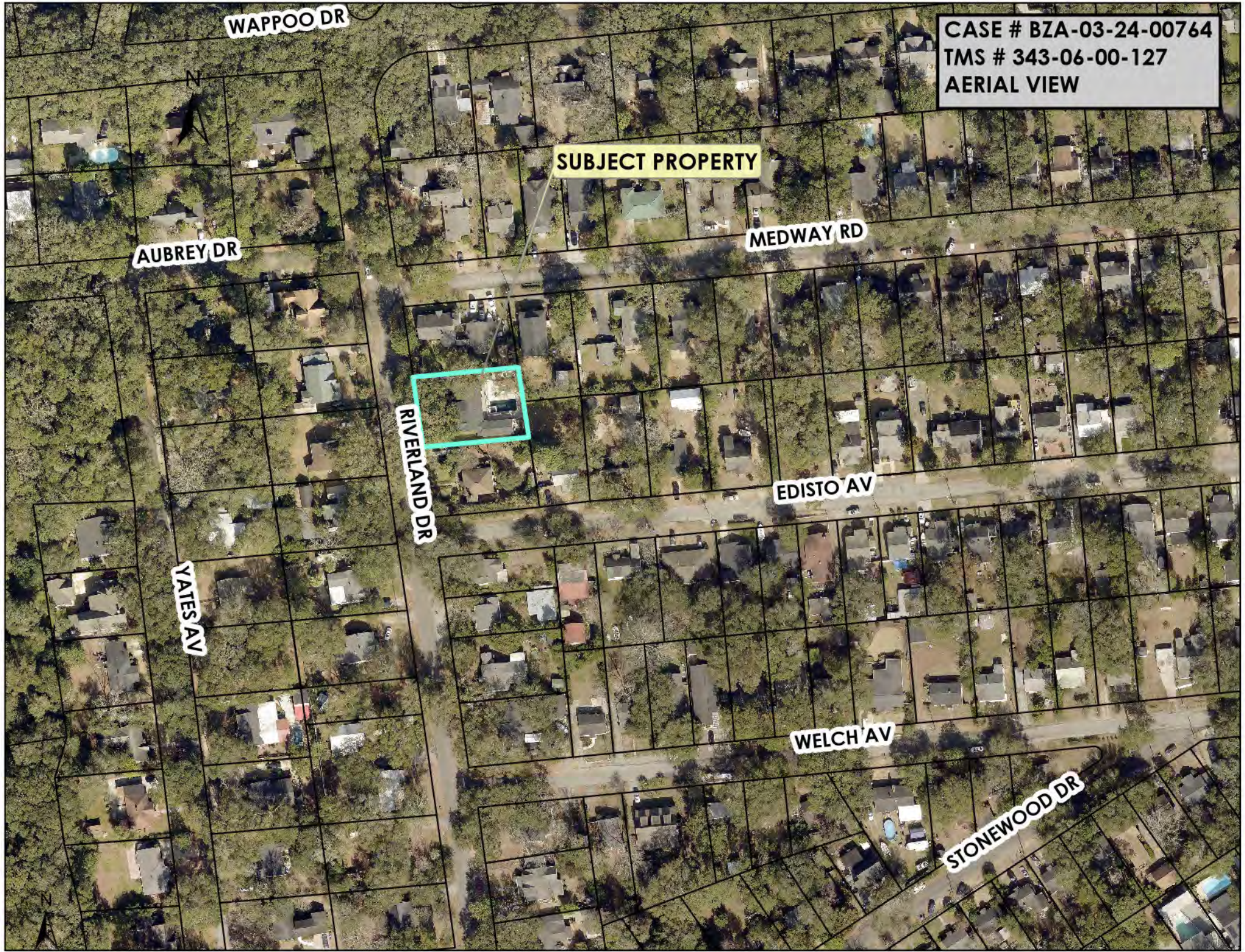
RIVERLAND DR

EDISTO AV

YATES AV

WELCH AV

STONEWOOD DR





**Case # BZA-03-24-00764**

**BZA Meeting of May 6, 2024**

**Subject Property: 224 Riverland Drive – James Island**

**Proposal: Variance request for construction within a restricted area three times the DBH (Critical Root Zone) of a 25.5" DBH Grand Laurel Oak Tree for an accessory building.**





# 25.5" DBH Laurel Oak Tree

Construct within 3 x DBH - Zoning Variance required from BZA





# Unpermitted Accessory Building

## 25.5" DBH Laurel Oak Tree





# Unpermitted Accessory Building





Staff Review:

The applicant and property owner, James Ellis, is requesting a variance for construction within a restricted area three times the DBH (Critical Root Zone) of a 25.5" Diameter Breast Height (DBH) Grand Laurel Oak Tree for an accessory building at 224 Riverland Drive (TMS # 343-06-00-127) on James Island in Charleston County. The subject property and all surrounding properties are located in the Low Density Residential (R-4) Zoning District in the Riverland Terrace neighborhood.

The 11,440 sq. ft. (0.26 acre) subject property contains a one-story single-family residence that was constructed in 1959 per Charleston County records and renovated in 2020, and an inground swimming pool that was permitted in 2021.

There was an existing unpermitted 20' storage container on the property. A permit to demolish the storage container was issued in February 2024. A (19'-10" by 15'-10" – 320 sq. ft.) one-car garage/storage building was constructed in January 2024. The intended use of the second floor appears to be a proposed Accessory Dwelling Unit (ADU). The applicant/property owner did not apply for zoning or building permits to build the accessory building. The unpermitted accessory building is in violation of several *Charleston County Zoning and Land Development Regulations Ordinance (ZLDR)* requirements:

- It was constructed within a restricted area three times the DBH (Critical Root Zone) of a 25.5" Diameter Breast Height (DBH) Grand Laurel Oak Tree. In addition, it appears the retaining wall that was constructed around the Grand Tree may be located within the Critical Root Zone;
- The accessory building meets the required 35' height maximum of the R-4 Zoning District, however, it is higher than the existing residence. Pursuant to the, *ZLDR Article 6.5 Accessory Uses and Structures, Sec. 6.5.1 Purpose and General Provisions, B. General Provisions 4. "Non-Agricultural Accessory Structures shall be subordinate to the Principal Structure in terms of height and gross Floor Area."* If the BZA approves this Grand Tree variance, the applicant/property owner will be required to apply for a zoning variance for the height of the structure; and
- If the applicant/property owner intends to use the structure as an Accessory Dwelling Unit (ADU), the applicant/property owner will be required to apply for a rear setback zoning variance. The required rear setback for an ADU is 10'. The required rear setback for a detached accessory building is 3'. The building is 5' from the rear property line at the closest point.

The applicant's letter of intent states, *"We are adding a storage building in back to free up space in the office for Kara's mother to move into our home. There was a previous slab in the back corner of the yard that was damaged during home renovation, so we*



*re-poured with the intention of building when funds allowed and actually reduced the size of the footprint. At the time in 2020 when the work was completed the tree was not a "grand tree" as DBH was below the threshold, so I did not think the variance was necessary. Now the structure is going up we were told we had to get a variance. As an arborist by trade, I gave much consideration to how the build was to go since I wanted to keep the tree instead of removing. The footers were built above grade as a raised slab to avoid excavation into roots and the tree has been proactively pruned to avoid interference for a number of years."*

Applicable ZLDR requirement:

*The Charleston County Zoning and Land Development Regulations Ordinance (ZLDR), Chapter 9 Development Standards, Article 9.2 Tree Protection and Preservation, Sec. 9.2.4.C. Required Tree Protection states, "In no case shall any paving, filling, grading, Building, or construction footing occur or be placed within three times the DBH in inches from the trunk of the Tree, unless otherwise approved by the Board of Zoning Appeals."*

*Applicable ZLDR Chapter 12 Definitions, Article 12.1 Terms and Uses Defined:*

*Arborist, Certified A Person certified by the International Society of Arboriculture.*

*Diameter Breast Height (DBH) The total diameter, in inches, of a Tree trunk or trunks measured at a point four and one-half feet above existing Grade (at the base of the Tree). In measuring DBH, the circumference of the Tree shall be measured with a standard diameter tape, and the circumference shall be divided by 3.14.*

*Grand Tree Any Tree with a diameter breast height of 24 inches or greater, with the exception of Pine Tree and Sweet Gum Tree (Liquidambar styraciflua) species.*

Staff conducted a site visit of the subject property on April 17, 2024. Please review the attachments for further details regarding this request.

Planning Director Review and Report regarding Approval Criteria of §3.10.6:

§3.10.6(1): *There are extraordinary and exceptional conditions pertaining to the particular piece of property;*

Response: There are no extraordinary and exceptional conditions pertaining to the 11,440 sq. ft. (0.26 acre) subject property. Therefore, the request does not meet this criterion. However, **the applicant's letter of intent** contends, **"Yes.** *The tree in question was not above the threshold of a grand tree when the slab was poured. Now that the building is going up we were told it needs a*



*variance that wasn't applicable at the time. Currently the tree is being taken care of by a trained arborist and is arguably in the latter phases of life (laurel oak). No damage to tree is to occur but there is insufficient room to set up traditional **tree protection at this point.**"*

§3.10.6(2): *These conditions do not generally apply to other property in the vicinity;*  
Response: These conditions generally apply to other properties in the vicinity. Surrounding properties are approximately the same size as the subject property and the majority of the properties in Riverland Terrace contain Grand Trees. Therefore, the request does not meet this criterion. However, **the applicant's letter of intent** contends, *"They apply to many **properties I've** seen and worked on in the tree industry. While protecting root zones is crucial it does not apply here as adequate consideration was given in the planning and construction process to avoid damage."*

§3.10.6(3): *Because of these conditions, the application of this Ordinance to the particular piece of property would effectively prohibit or unreasonably restrict the utilization of the property;*  
Response: The application of this Ordinance, Chapter 9 Development Standards, Article 9.2 Tree Protection and Preservation, Sec. 9.2.4.C. Required Tree Protection to 224 Riverland Drive would require the applicant/property owner to demolish the unpermitted accessory building, if the BZA denies this variance or any future variances. The application of this Ordinance to the property does not unreasonably restrict the utilization of the property. Therefore, the request does not meet this criterion. However, **the applicant's** letter of intent contends, *"Yes. The construction is already done and no damage has occurred or will occur moving forward."*

§3.10.6(4): *The authorization of a variance will not be of substantial detriment to adjacent property or to the public good, and the character of the zoning district will not be harmed by the granting of the variance;*  
Response: Authorization of this variance request may be of substantial detriment to adjacent properties or to the public good. Therefore, the character of the Low Density Residential (R-4) Zoning District may be harmed and the request may not meet this criterion. However, **the applicant's** letter of intent contends, *"No. The building is in place and I have conferred with neighbors who have no objection. I've explained impact on the tree to adjacent **neighbor who agrees with the assessment.**"*

§3.10.6(5): *The Board of Zoning Appeals shall not grant a variance the effect of which would be to allow the establishment of a use not otherwise permitted in a*



*zoning district, to extend physically a nonconforming use of land, or to change the zoning district boundaries shown on the official zoning map. The fact that property may be utilized more profitably, should a variance be granted, may not be considered grounds for a variance;*

Response: The variance does not allow a use that is not permitted in this zoning district, nor does it extend physically a nonconforming use of land or change the zoning district boundaries. Therefore, the request meets this criterion.

§3.10.6(6): *The need for the variance is not the result of the applicant's own actions;*

Response: The need for the variance is **the result of the applicant's own actions**. The applicant/property owner constructed the detached accessory building without obtaining zoning and building permits. If the applicant submitted the site plan and elevations to the Zoning and Planning Department prior to commencing construction, as required by local and state law, Staff would have informed the applicant that the plan does not meet several ZLDR Ordinance requirements. The applicant would have had an option to revise the plan or to apply for Zoning Variances before commencing construction. In addition, the applicant/property owner is an ISA Certified Arborist and should know that permits are required in Charleston County for any proposed disturbance or construction. Therefore, the request does not meet this criterion. However, **the applicant's letter of intent** contends, *"I'm not sure how to answer. I'm not sure a variance is indeed needed. Yes, I poured the slab, but the tree was not protected at the time. Now I'm told a variance is needed retroactively which seems conflicted."*

§3.10.6(7): *Granting of the variance does not substantially conflict with the Comprehensive Plan or the purposes of the Ordinance;*

Response: Granting of the variance substantially conflicts with the Comprehensive Plan and the purposes of the Ordinance. Therefore, the request does not meet this criterion. However, **the applicant's letter of intent contends**, *"No. As previously stated...much consideration was given to the tree's health due to the nature of my profession and desire to keep the tree on site."*

#### **Board of Zoning Appeals' Action:**

According to Article 3.10 Zoning Variances, Section §3.10.6 Approval Criteria of the Charleston County Zoning and Land Development Regulations Ordinance (ZLDR), (adopted July 18, 2006), The Board of Zoning Appeals has the authority to hear and decide appeals for a Zoning Variance when strict application of the provisions of this Ordinance would result in unnecessary hardship (§3.10.6A). A Zoning Variance may be granted in an individual case of unnecessary hardship if the Board of Zoning Appeals



makes and explains in writing their findings (§3.10.6B Approval Criteria).

In granting a variance, the Board of Zoning Appeals may attach to it such conditions regarding the location, character, or other features of the proposed building or structure as the Board may consider advisable to protect established property values in the surrounding area or to promote the public health, safety, or general welfare (§3.10.6C).

The Board of Zoning Appeals may approve, approve with conditions or deny Case # BZA-03-24-00764 [Variance request for construction within a restricted area three times the DBH (**Critical Root Zone**) of a **25.5"** DBH Grand Laurel Oak Tree for an accessory building at 224 Riverland Drive (TMS # 343-06-00-127) on James Island in Charleston County] based on the BZA's "Findings of Fact", unless additional information is deemed necessary to make an informed decision. In the event the BZA decides to approve the application, Staff recommends the following conditions:

1. If the Grand Tree requested for encroachment (**25.5" DBH**) **Grand Laurel Oak Tree** dies within 3 years of the completion of the project, the applicant shall mitigate the tree by either (a) submitting a mitigation plan for review and approval indicating the installation of canopy trees no smaller than two and one-half (2.5) inches in caliper equaling inch per inch replacement, (b) by depositing funds into the Charleston County Tree Fund as described in Sec. 9.2.6 of the ZLDR, or (c) a combination of both (a) and (b). The allotted mitigation shall be in place prior to its removal.
2. **The tree barricade for the 25.5" DBH** Laurel Oak shall be installed around the tree to the property lines, constructed of chain link fencing, and inspected by staff prior to Zoning Permit approval for construction. All objects/materials shall be removed **from around the tree and 3" of mulch** shall be added within the barricade area.
3. The applicant/property owner shall hire a third-party Certified Arborist to monitor and treat the Tree onsite during and after construction. The applicant shall provide a Tree Preservation Plan prepared by the Arborist to the staff for review and approval prior to Zoning Permit approval for construction.
4. The applicant/property owner shall apply for all required zoning and building permits for the accessory building.
5. Prior to Zoning Permit approval, the accessory building requires a height variance from the BZA. If the applicant/property owner intends to use the accessory building as an Accessory Dwelling Unit (ADU), a rear setback variance from the BZA would be required before the ADU use can be permitted.



**ZONING VARIANCE APPLICATION**  
**Charleston County Board of Zoning Appeals (BZA)**

<b>Property Information</b>			
Subject Property Address:		224 Riverland Dr. Charleston, SC 29412	
Tax Map Number(s):		3430600127	
Current Use of Property:		Residence	
Proposed Use of Property:		Residence	
Zoning Variance Description:		Construction within restricted space of a grand tree. (9.2.4.C)	
<b>Applicant Information (Required)</b>			
Applicant Name (please print):		James Ellis	
Name of Company (if applicable):			
Mailing Address: 224 Riverland Dr.			
City:	Charleston	State:	SC
		Zip Code:	29412
Email Address: jamesellis@hotmail.com		Phone #: 8434788929	
Applicant Signature: <i>James Ellis</i>		Date: 3/4/24	
<b>Representative Information (Complete only if applicable. Attorney, Builder, Engineer, Surveyor etc.)</b>			
Print Representative Name and Name of Company:		Preston Jones	
Mailing Address: 808 Bibury Ct.			
City:	Charleston	State:	SC
		Zip Code:	29414
Email Address: preston@manalelandscaping.com		Phone #: 843-729-6461	
<b>Designation of Agent (Complete only if the Applicant listed above is not the Property Owner.)</b>			
I hereby appoint the person named as Applicant and/or Representative as my (our) agent to represent me (us) in this application.			
Property Owner(s) Name(s) (please print):			
Name of Company (if applicable, LLC etc.):			
Property Owner(s) Mailing Address:			
City:		State:	
		Zip Code:	
		Phone #:	
Property Owner(s) Email Address:			
Property Owner(s) Signature:			Date:
<b>FOR OFFICE USE ONLY:</b>			
Zoning District:	R-4	Flood Zone:	X (D513K)
		Date Filed:	3-25-2024
		Fee Paid:	\$ 250
Application #:	BZA-03-24-00764	TMS #:	343-06-00-127
		Staff Initials:	JAC CW



## Description of Request

*Please describe your proposal in detail. You may attach a separate sheet if necessary. Additionally, you may provide any supporting materials that are applicable to your request (photographs, letter of support, etc.)*

We are adding a storage building in back to free up space in the office for Kara's mother to move into our home. There was a previous slab in the back corner of the yard that was damaged during home renovation so we re-poured with the intention of building when funds allowed and actually reduced the size of the footprint. At the time in 2020 when the work was completed the tree was not a "grand tree" as DBH was below the threshold so I did not think the variance was necessary. Now the structure is going up we were told we had to get a variance. As an arborist by trade I gave much consideration to how the build was to go since I wanted to keep the tree instead of removing. The footers were built above grade as a raised slab to avoid excavation into roots and the tree has been proactively pruned to avoid interference for a number of years.

## Applicant's response to Article 3.10 Zoning Variances, §3.10.6 Approval Criteria

Zoning Variances may be approved only if the Board of Zoning Appeals finds that the proposed use meets all 7 of the approval criteria. In evaluating your request, the members of the board will review the answers below as a part of the case record. You may attach a separate sheet if necessary.

1. Are there extraordinary and exceptional conditions pertaining to the subject property? Explain:

**Yes. The tree in question was not above the threshold of a grand tree when the slab was poured. Now that the building is going up we were told it needs a variance that wasn't applicable at the time. Currently the tree is being taken care of by a trained arborist and is arguably in the latter phases of life (laurel oak). No damage to tree is to occur but there is insufficient room to set up traditional tree protection at this point.**

2. Do these conditions generally apply to other property in the vicinity or are they unique to the subject property? Explain:

**They apply to many properties I've seen and worked on in the tree industry. While protecting root zones is crucial it does not apply here as adequate consideration was given in the planning and construction process to avoid damage.**

3. Because of these extraordinary and exceptional conditions, would the application of this Ordinance to the subject property effectively prohibit or unreasonably restrict the utilization of the property? Explain:

**Yes. The construction is already done and no damage has occurred or will occur moving forward.**



4. Will the authorization of a variance be a substantial detriment to adjacent property or to the public good? Will the character of the zoning district be harmed if this variance is granted? Explain:

**No. The building is in place and I have conferred with neighbors who have no objection. I've explained impact on the tree to adjacent neighbor who agrees with the assessment.**

5. The BZA shall not grant a variance the effect of which would be to allow the establishment of a use not otherwise permitted in a zoning district, to extend physically a Nonconforming Use of land, or to change the zoning district boundaries shown on the Official Zoning Map. The fact that property may be utilized more profitably if a Zoning Variance is granted shall not be considered grounds for granting a Zoning Variance. Does the variance request meet this criterion?

**Yes.**

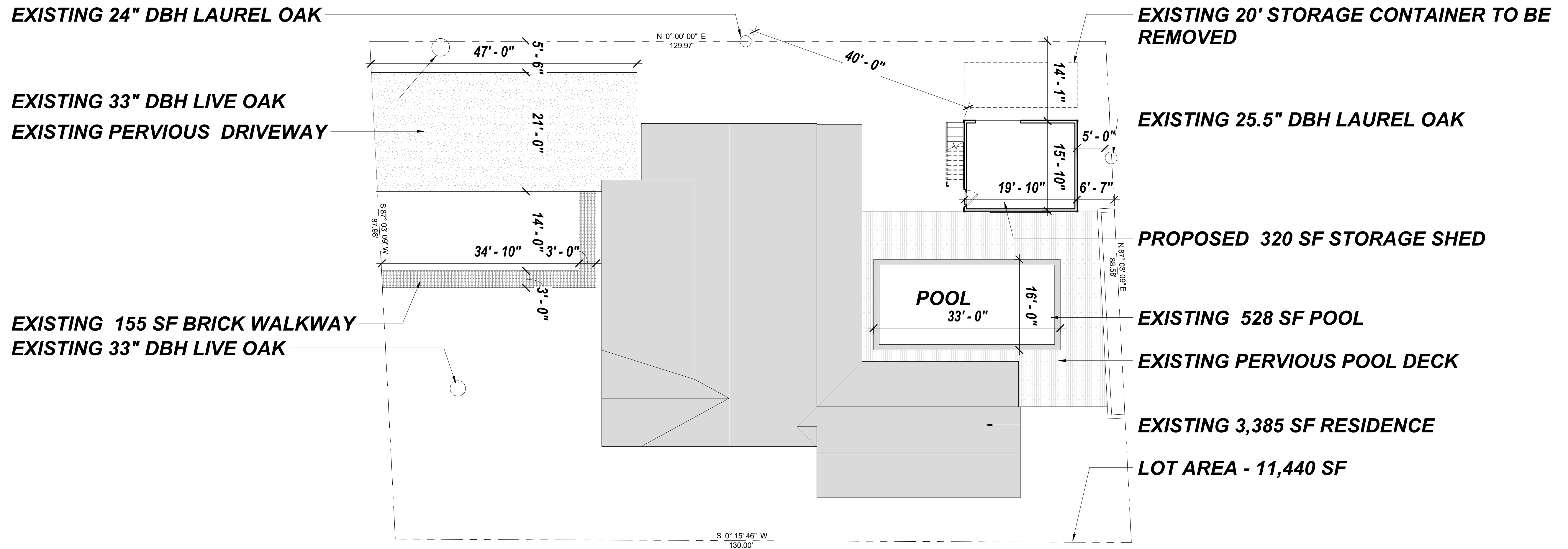
6. Is the need for the variance the result of your own actions? Explain:

**I'm not sure how to answer. I'm not sure a variance is indeed needed. Yes, I poured the slab, but the tree was not protected at the time. Now I'm told a variance is needed retroactively which seems conflicted.**

7. Does the variance substantially conflict with the Charleston County Comprehensive Plan or the purposes of the Ordinance? Explain

**No. As previously stated...much consideration was given to the tree's health due to the nature of my profession and desire to keep the tree on site.**

In granting a variance, the Board of Zoning Appeals may attach to it such conditions regarding the location, character, or other features of the proposed building or structure as the Board may consider advisable to protect established property values in the surrounding area or to promote the public health, safety, or general welfare.



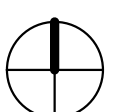
IMPERVIOUS COVERAGE TABLE (ZLDR 4.12.3 R-4)		
TOTAL LOT AREA	11,440 SF	
ALLOWABLE IMPERVIOUS AREA	4,576 SF	40%
EXISTING IMPERVIOUS AREA	4,068 SF	36%
PROPOSED IMPERVIOUS AREA	4,388 SF	38%

**ELLIS RESIDENCE STORAGE BUILDING**

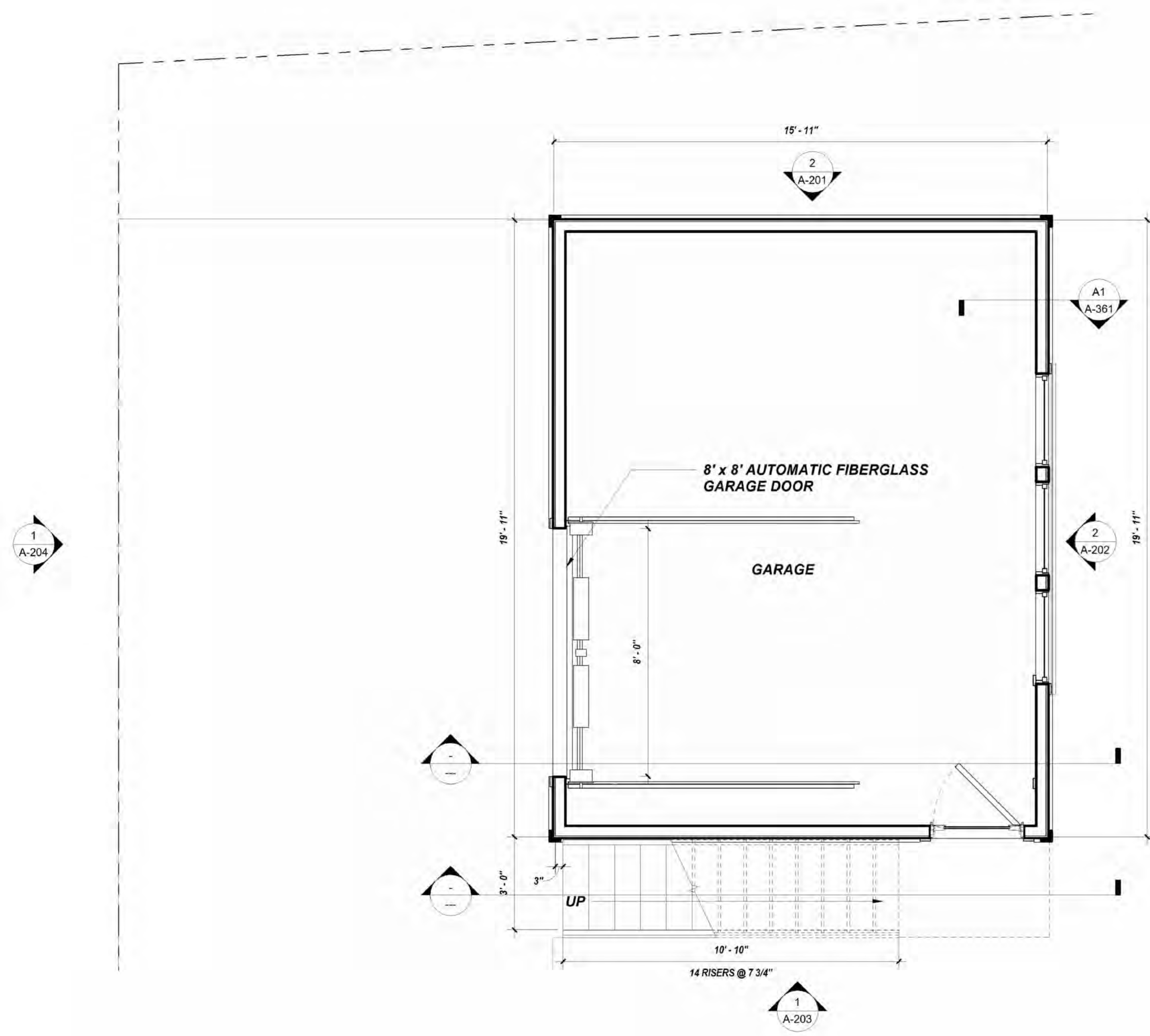
ARCHITECT:  
THEODORE JOHN RISCH JR, AIA  
2151 WESTRIVERS RD  
CHARLESTON, SC 29412  
901.218.6768  
SC LICENSE #9407

PROJECT NAME: 224 RIVERLAND DRIVE  
PROJECT NUMBER:  
DATE: JANUARY 04, 2024  
DRAWN BY: TJR  
CHECKED BY: TJR

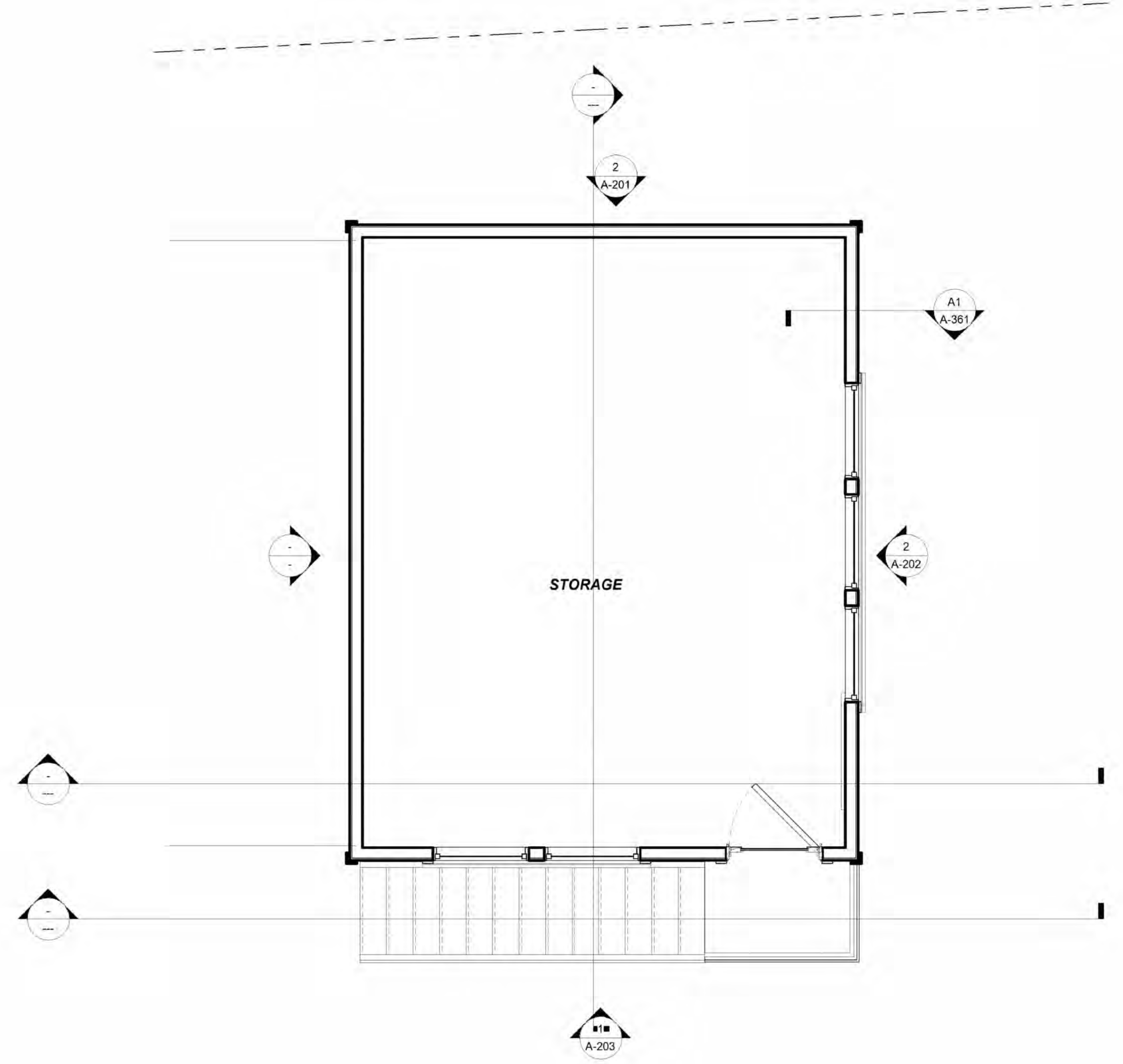
**SITE PLAN**  
SCALE: 1" = 10'-0"  
**A-101**







**A1 GARAGE PLAN**  
3/8" = 1'-0"



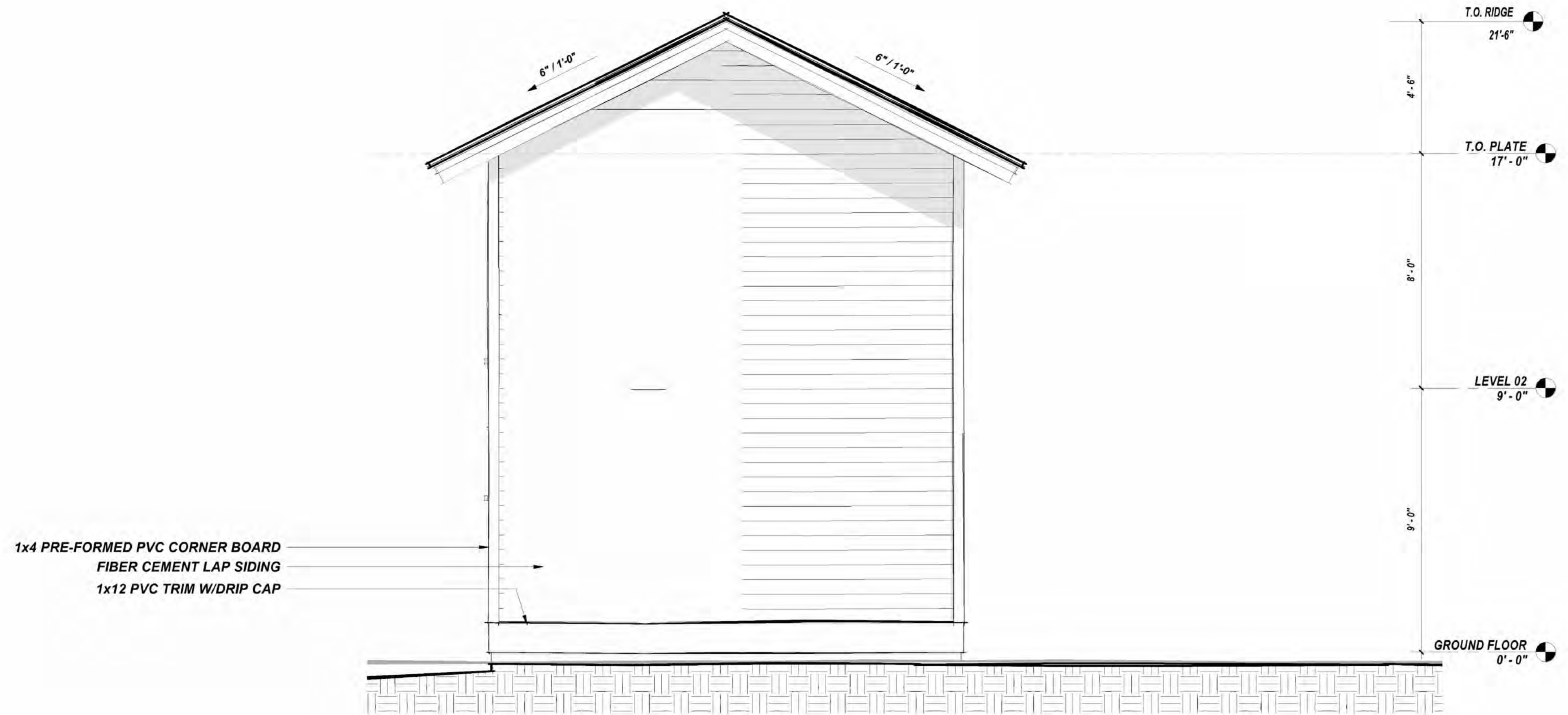
**A2 LEVEL 02**  
3/8" = 1'-0"

**ELLIS RESIDENCE STORAGE BUILDING**

**ARCHITECT:**  
THEODORE JOHN RISCH JR, AIA  
2151 WESTRIVERS RD  
CHARLESTON, SC 29412  
901.218.6768  
SC LICENSE #9407

PROJECT NAME: 224 RIVERLAND DRIVE  
PROJECT NUMBER:  
DATE: JANUARY 04, 2024  
DRAWN BY.: TJR  
CHECKED BY: TJR

**FLOOR PLANS**  
SCALE: 3/8" = 1'-0"  
**A-110**



**ELLIS RESIDENCE STORAGE BUILDING**

**ARCHITECT:**  
 THEODORE JOHN RISCH JR, AIA  
 2151 WESTRIVERS RD  
 CHARLESTON, SC 29412  
 901.218.6768  
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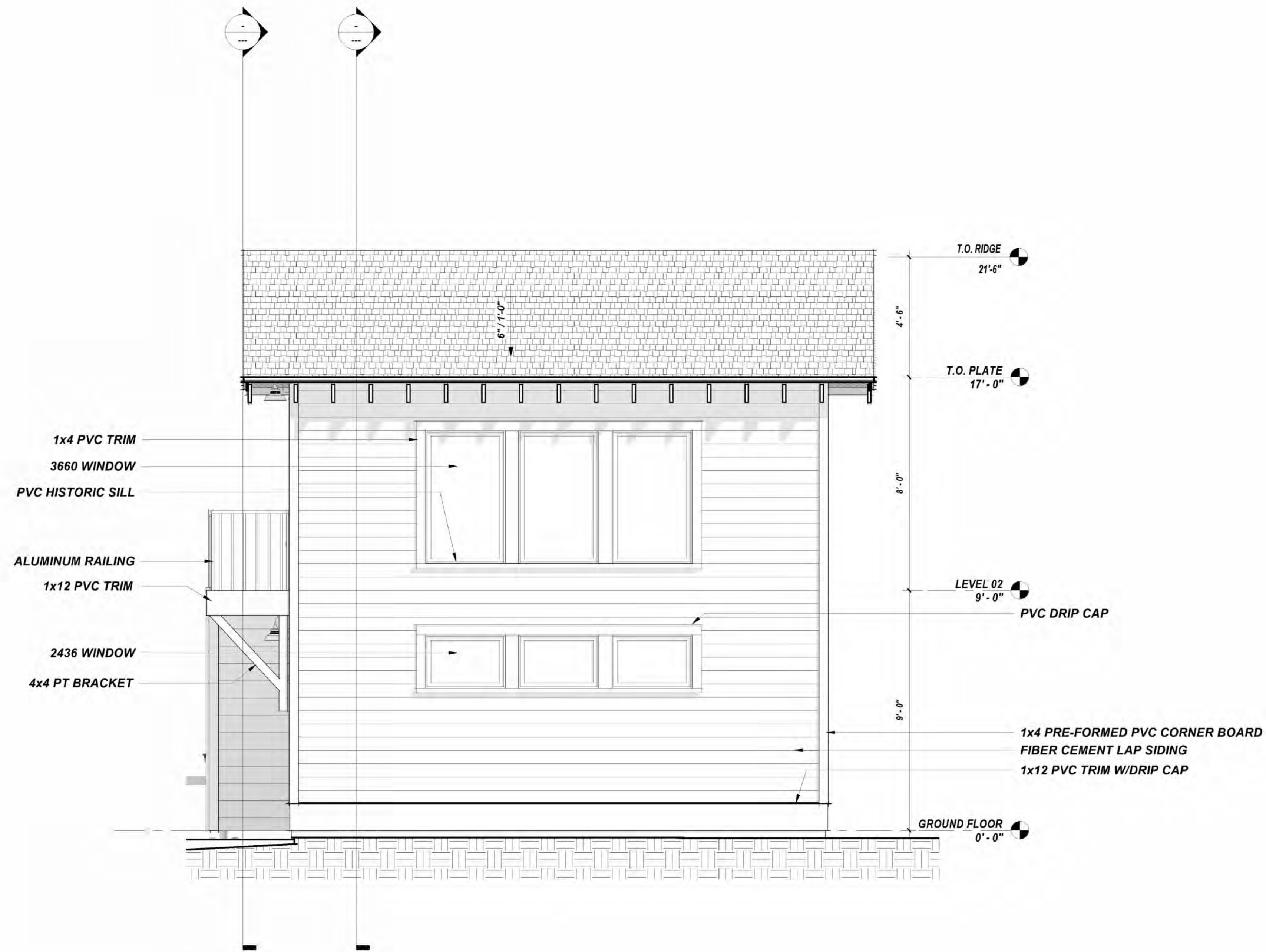
PROJECT NAME:	224 RIVERLAND DRIVE
PROJECT NUMBER:	
DATE:	JANUARY 04, 2024
DRAWN BY:.	TJR
CHECKED BY:	TJR

**EAST ELEVATION**

SCALE: 3/8" = 1'-0"

**A-201**





# ELLIS RESIDENCE STORAGE BUILDING

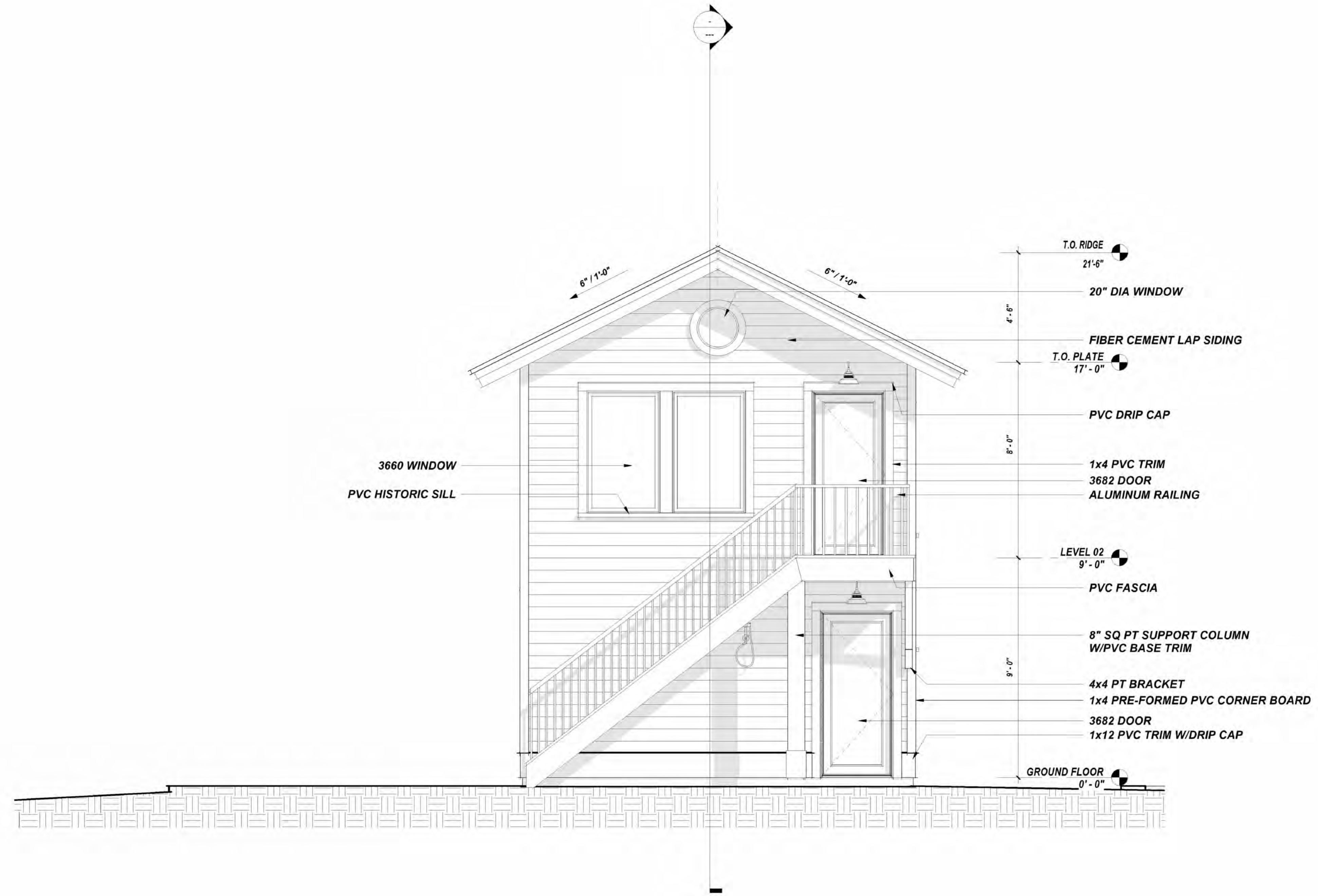
**ARCHITECT:**  
 THEODORE JOHN RISCH JR, AIA  
 2151 WESTRIVERS RD  
 CHARLESTON, SC 29412  
 901.218.6768  
 SC LICENSE #9407

PROJECT NAME: 224 RIVERLAND DRIVE  
 PROJECT NUMBER:  
 DATE: JANUARY 04, 2024  
 DRAWN BY.: TJR  
 CHECKED BY: TJR

## SOUTH ELEVATION

SCALE: 3/8" = 1'-0"

**A-202**



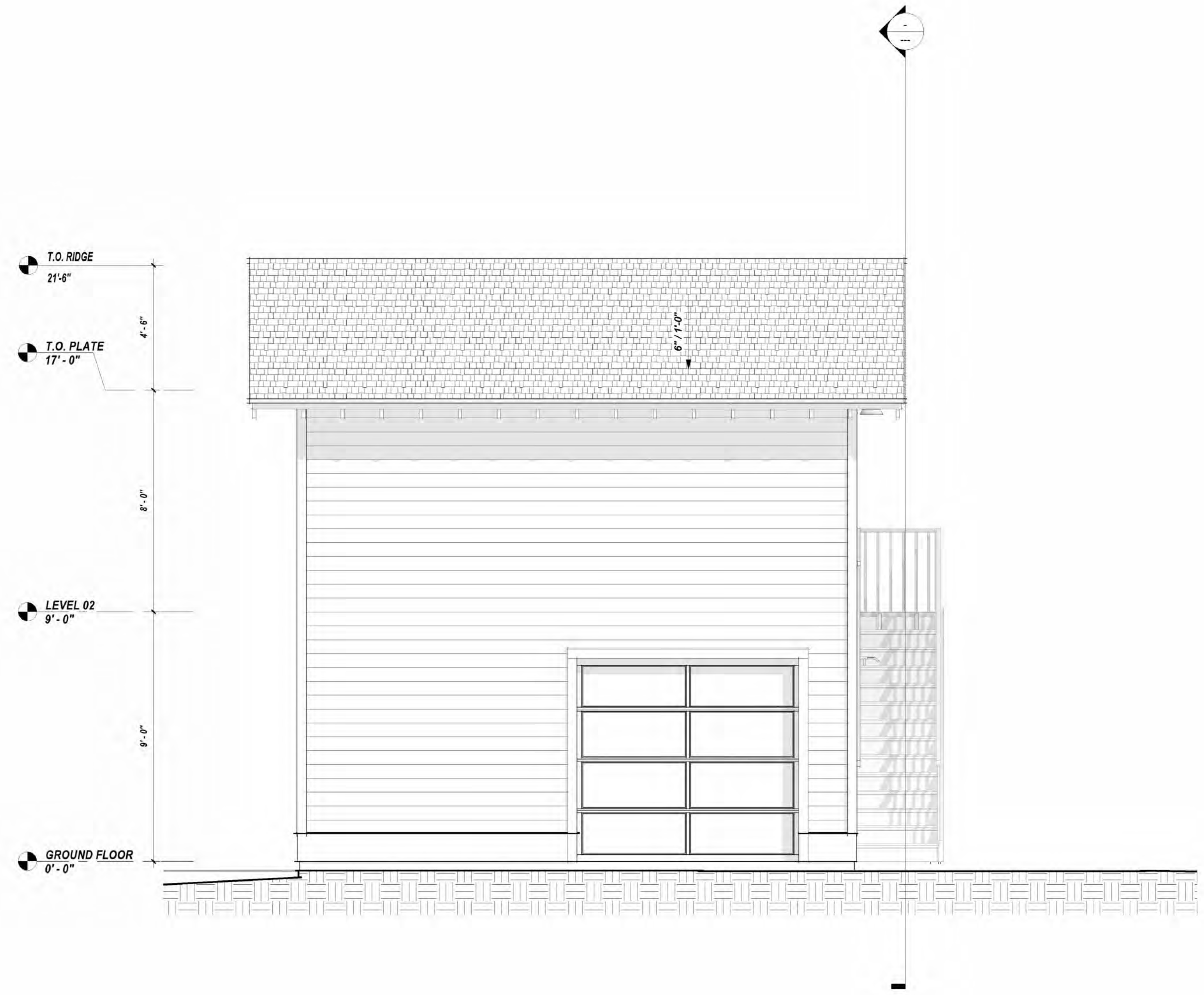
# ELLIS RESIDENCE STORAGE BUILDING

**ARCHITECT:**  
 THEODORE JOHN RISCH JR, AIA  
 2151 WESTRIVERS RD  
 CHARLESTON, SC 29412  
 901.218.6768  
 SC LICENSE #9407

PROJECT NAME: 224 RIVERLAND DRIVE  
 PROJECT NUMBER:  
 DATE: JANUARY 04, 2024  
 DRAWN BY.: TJR  
 CHECKED BY: TJR

**WEST ELEVATION**  
 SCALE: 3/8" = 1'-0"  
**A-203**





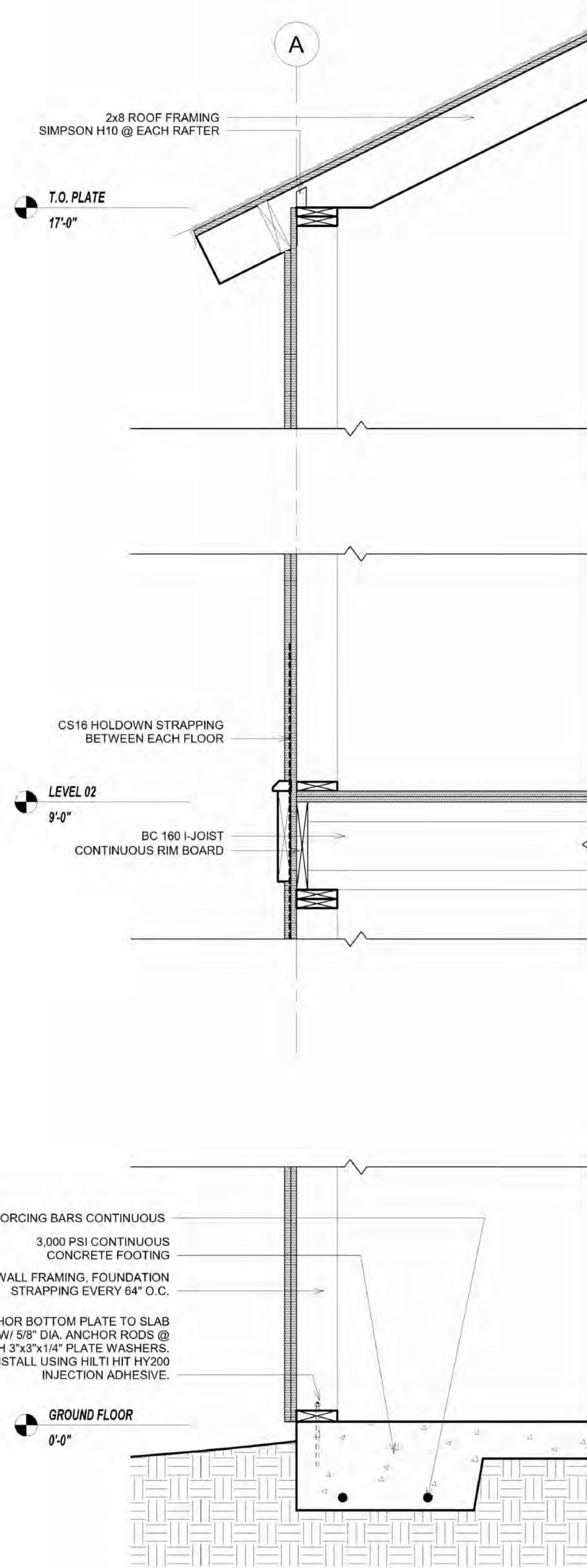
**ELLIS RESIDENCE STORAGE BUILDING**

**ARCHITECT:**  
 THEODORE JOHN RISCH JR, AIA  
 2151 WESTRIVERS RD  
 CHARLESTON, SC 29412  
 901.218.6768  
 SC LICENSE #9407

PROJECT NAME: 224 RIVERLAND DRIVE  
 PROJECT NUMBER:  
 DATE: JANUARY 04, 2024  
 DRAWN BY.: TJR  
 CHECKED BY: TJR

**NORTH ELEVATION**  
 SCALE: 3/8" = 1'-0"  
**A-204**



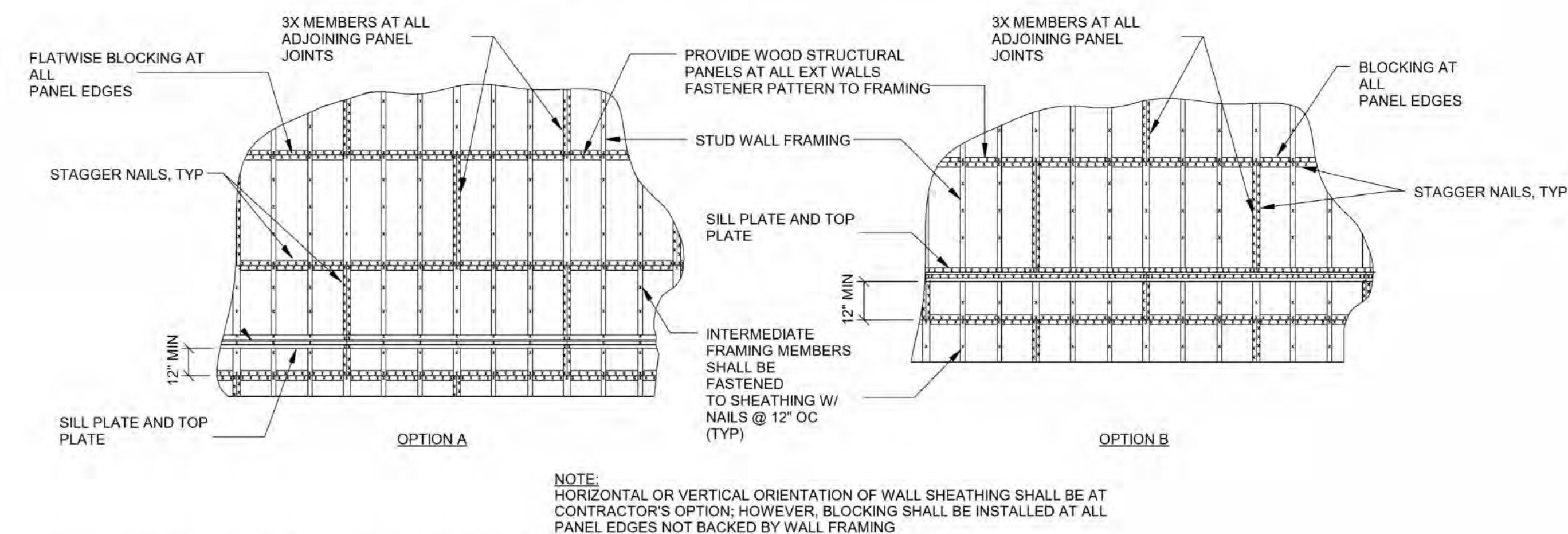


**A1** TYP WALL SECTION  
1" = 1'-0"

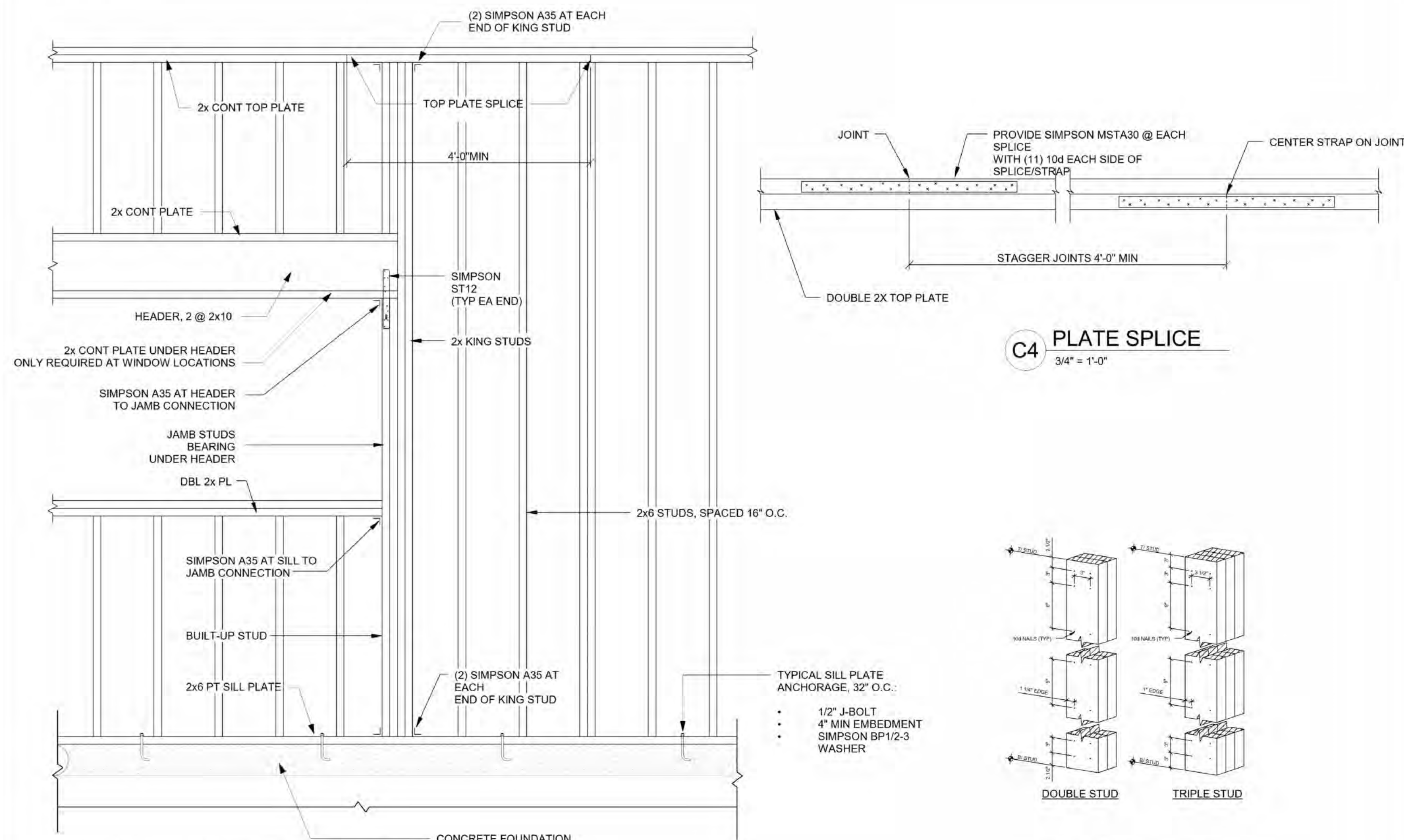
## STRUCTURAL DESIGN CRITERIA

- FOUNDATION DESIGN VALUES:**  
ALLOWABLE BEARING CAPACITY 2,000-PSF
- GRAVITY LOAD DESIGN VALUES: IBC, 2018 EDITION**  
 FLOOR LIVE LOADS:  
 RESIDENTIAL LOADING 40-PSF  
 ROOF LIVE LOADS:  
 SLOPED ROOF 16-PSF  
 GROUND SNOW LOADS:  
 SNOW 5-PSF  
 DEAD LOADS:  
 ACTUAL MATERIAL WEIGHTS PER ASCE 7-10
- SEISMIC DESIGN VALUES: IBC SECTION 1614**  
 $S_s = 1.00$   
 $S_1 = 0.319$   
 $S_{ds} = 0.734g$   
 $S_{d1} = 0.375g$   
 SITE CLASS: "D"  
 BUILDING RISK CATEGORY: "II"  
 IMPORTANCE FACTOR:  $I_e = 1.0$   
 SEISMIC DESIGN CATEGORY: "D2"  
 ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE  
 SEISMIC FORCE RESISTING SYSTEM:  
 -LIGHT FRAMED WOOD SHEATHED WALLS  
 RESPONSE MODIFICATION FACTOR:  $R = 6.5$   
 DEFLECTION AMPLIFICATION FACTOR:  $C_d = 4$   
 SYSTEM OVERSTRENGTH FACTOR:  $\Omega = 3$   
 ALLOWABLE INTERSTORY DRIFT: 0.02 Hsx
- WIND LOAD DESIGN VALUES: IBC SECTION 1609**  
 $V = 147$  mph (3-sec gust)  
 BUILDING RISK CATEGORY: "II"  
 IMPORTANCE FACTOR:  $I = 1.0$   
 EXPOSURE CATEGORY: "D"  
 ENCLOSURE CLASSIFICATION: ENCLOSED  
 WIND DIRECTIONALITY FACTOR:  $K_d = 0.85$   
 TOPOGRAPHIC FACTOR:  $K_{zt} = 1.0$   
 VELOCITY EXPOSURE COEFFICIENT:  $K_z = 1.103$   
 VELOCITY PRESSURE:  $q = 55.3$  psf  
 INTERNAL PRESSURE COEFFICIENT:  $G_{Cpi} = +/- 0.18$   
 ALLOWABLE INTERSTORY DRIFT: 0.0025 Hsx

NOTES REGARDING SHEARWALLS:  
 AS A MINIMUM STUDS SHALL BE DOUBLED (MIN) AT SHEARWALL ENDS. REF PLAN FOR REQUIREMENTS.  
 FASTENERS ALONG THE EDGES IN THE SHEAR PANELS SHALL BE PLACED NOT LESS THAN 3/8" IN FROM PANEL EDGES.  
 PANEL THICKNESSES SHOWN ARE MINIMUMS. PANELS LESS THAN 12" WIDE SHALL NOT BE USED. PANEL EDGES SHALL BE FULLY BLOCKED WITH FLATWISE 2X4 OR 2X6.  
 NAILS USED TO ATTACH WOOD STRUCTURAL PANELS TO STUD FRAMING SHALL BE 10d NAILS @ 6" OC (EDGE) AND 12" OC (INTERIOR) (TYP UNO).



**D3** TYPICAL DETAILS - SHEAR WALL PANEL  
3/4" = 1'-0"



**A3** TYPICAL SHEAR WALL ELEVATION  
3/4" = 1'-0"

**C4** PLATE SPLICE  
3/4" = 1'-0"

**A4** BUILT UP STUD  
3/4" = 1'-0"



R. M. C. Office, Char. Co. S.C.

Recorded Apr 21-1927  
at 12:27 P.M. Plat Book

On page 33. This Plat

furnished by Middleton & Middleton

Julius E. Cogswell, R.M.C.

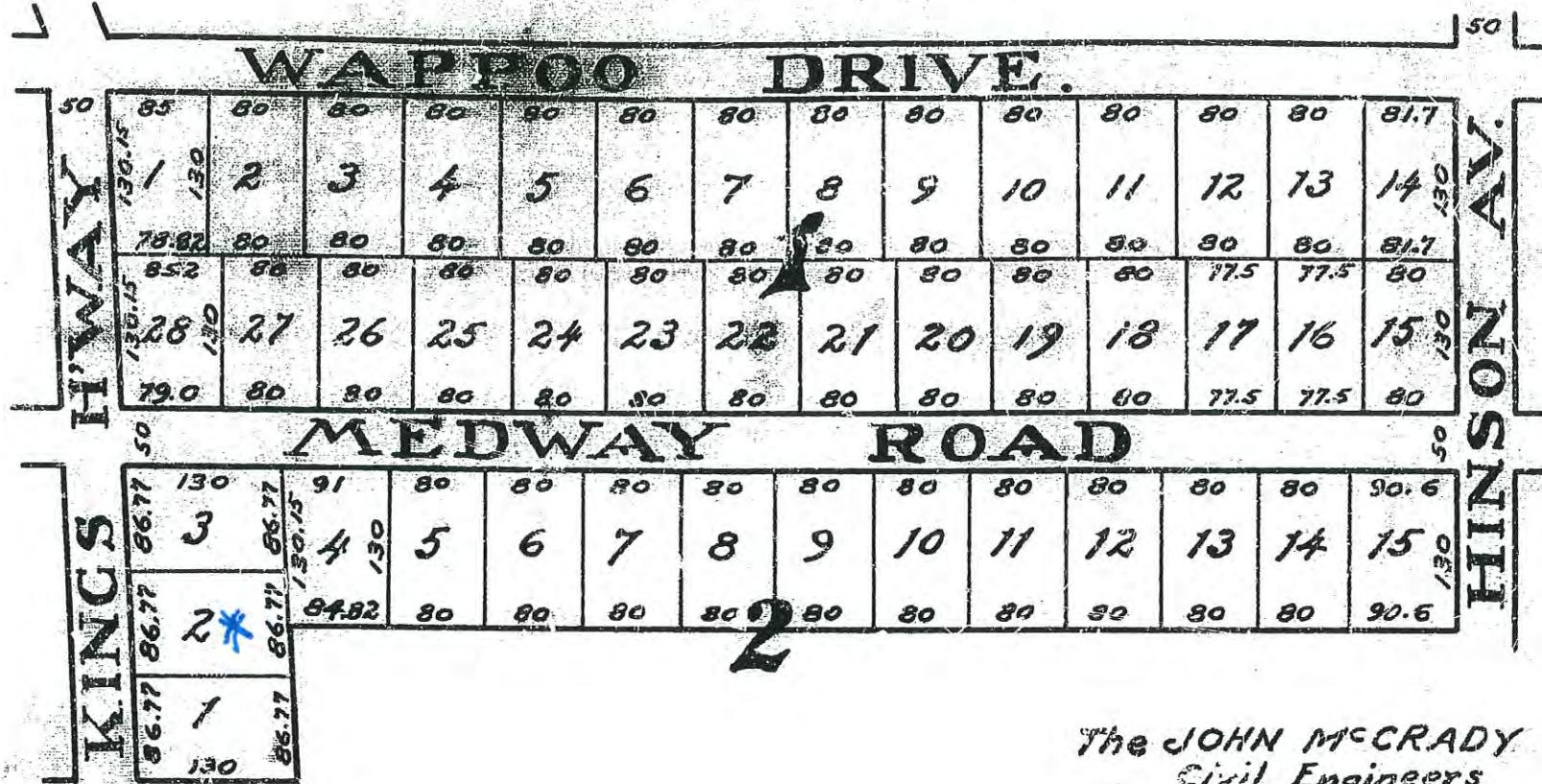
Per Ck A.B. EDISTO REALTY CO.  
CHARLESTON, S.C.

# Riverland Terrace

## BLOCK 1 & Part of BLOCK 2

Charleston County  
S.C.

PLAN FILE	3
DRAWER	1
FOLDER	2
DRAWING No.	9



The JOHN McCRA DY CO.  
Civil Engineers  
Charleston, S.C.

Scale 1"=200' March, 1927.